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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/724,991

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EXAMINER

FLEISCHER, MARK A

ART UNIT

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3623

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/724,991	<b>Applicant(s)</b> SCHALL, MATTHEW	
	<b>Examiner</b> MARK A. FLEISCHER	<b>Art Unit</b> 3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 April 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### **Status of Claims**

1. This action is in reply to the response to the Non-Final Rejection filed on 30 January 2008.
2. Claims 1–5 and 9–16 have been amended.
3. Claims 1–16 are currently pending and have been examined.

### ***Response to Amendment***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action.
5. The objections to the drawings in the previous office action are withdrawn, in response to Applicant's remarks and new drawings. Examiner has entered the new drawings.
6. The objection to the specification in the previous office action is withdrawn in light of Applicant's amendments to the specification. Examiner has entered the amended specification.
7. The rejections of claims 3, 4, 11 and 12 under 35 U.S.C. §112, 2<sup>nd</sup> are withdrawn in light of Applicant's amendments to these claims.
8. The rejections of claims 1–16 under 35 U.S.C. §101 for lacking in substantial and credible utility are withdrawn in light of Applicant's remarks clarifying the invention and the associated amendments to the specification.

### ***Response to Arguments***

9. Applicant's arguments received on 28 April 2008 have been fully considered but they are not persuasive. Referring to the previous Office action, Examiner has cited relevant portions of the references as a means to illustrate the systems as taught by the prior art and has expanded the teachings for comprehensibility and to address Applicant's amendments as shown below.

10. With regard to the limitations of claims 1 and 9, Applicant argues that the methods described in Veenhoven are based on linear transformations and that

“[i]n stark contrast, the present invention utilizes a conversion process that results in several of the intervals coinciding even when one of the scales is not an integer multiple of the other the embodiment describes conversion of a 10-point scale to a 7-point scale. During the conversion, several intervals align (i.e., 1 to 1, 4 to 3, 7 to 5, and 10 to 7 - on the 10- point and 7-point scales, respectively). The remaining intervals are averaged such that the average of two adjacent intervals on the 10-point scale aligns with the 7-point scale interval (i.e.,  $2/3$  to 2,  $5/6$  to 4 and  $8/9$  to 6 - on the 10-point and 7-point scales, respectively). Applicant's technique further leverages the fact that most zero frequencies occur at 2 or 3. Thus, by adding these adjacent cells together on the 10-point scale the empty cells may be collapsed to extrapolate any missing data.” (See Applicant's Remarks, page 18, last paragraph)

Applicant therefore suggests that the Applicant's invention is distinct from those described in the prior art of record and that the types of transformations described in their response and in the specification provides evidence of these distinctions. Assuming *arguendo* that the transformations described in the specification and in Applicant's remarks render the invention patentably distinct from those described in the prior art, none of the claims or the amendments thereto limit the transformations to the types so indicated in the specification and remarks. Thus, the prior art continues to read on the substance of the amended claims.

11. With regard to the limitations of claims 2 and 10, Applicant essentially argues that Garson, the prior art of record, “teaches away from the claimed invention” and further describes the manner in which the “standardization” process works by showing how the weighting of a particular set of survey responses is inversely proportional to the number of responses. That is, fewer responses are weighted more for the ‘hotels’ with fewer survey responses and vice versa. Applicant correctly notes that the example cited in the first Office action referring to Garson on page 8 therein is inapposite to the method disclosed in the specification. Nevertheless, Garson does

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disclose the type of standardization Applicant describes as shown below in the rejection of the amended claims. Moreover, as stated above, none of the claims or the amendments thereto, limits the standardization process to those described in the specification or remarks. Thus, the prior art continues to read on the substance of the amended claims.

12. With regard to the remaining claims, Applicant argues that because they are dependent from claims which Applicant considers to be non-obvious, these claims must also be considered non-obvious. As noted above, however, Examiner maintains that the prior art of record does teach both the original and amended claims, hence Applicant's arguments are not persuasive.

13. In consideration of the foregoing and Applicant's assertions that the prior art of record does not fairly teach or disclose each and every limitation contained within the claims, it appears that the Applicant is reading limitations into the claims from the specification. That is, the points argued are not recited in the claims themselves. For that reason, a solid argument in favor of their contemplation cannot be established. Subsequent amendments to the claim language that would include the positions presented by the Applicant's arguments would provoke the Examiner to address the claims individually and as a whole, in light of the remaining limitations as well as the specification. Until such amendments are rendered, the arguments must be disregarded and will not be countered except to the extent indicated above for the sole purpose of providing the Applicant some assistance and guidance.

14. It is noted that the applicant did not challenge the officially cited fact(s) cited in the pervious office action. Therefore those statements as presented are hereinafter considered prior art. Specifically, it has been established that it was old and well known in the survey sampling arts and statistical analysis arts at the time of the invention to:

- calculate mean values and related measures of central tendency;
- use the method of resampling to obtain a distribution of values which in this case are percentage score values associated with a particular entity, *i.e.*, the *primary* cluster;
- provide statistical tests to determine whether there are any statistically significant differences between and among distinct sets of values.
- rank a value associated with a particular entity in terms of an overall distribution. A common and well-known method is a percentile ranking which maps particular scores with respect to an overall distribution of scores.

#### ***Claim Rejections - 35 USC § 103***

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 1 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Veenhoven (*World Database of Happiness: Happiness In Nations*-Subjective appreciation of life in 56 nations 1946-1992).

*A computer software program tangibly embodied in a computer readable medium, the program including machine-readable instructions executable by a computer processor for performing a method of comparing numerical survey scores based upon differing scoring response scales* (Veenhoven, on at least page 62, Section 7.3, paragraph 1 describes a survey score conversion technique: “Though comparison is better possible...we considered the possibilities for converting scores on different indicators to a common standard.” Moreover, the section is entitled “CONVERTING AVERAGE SCORES ON NON-IDENTICAL ITEMS” where “Non-Identical” is equivalent to *disparate*. Emphasis added.) *the computer program (and method) steps comprising:*

- *receiving at least one first survey score based on a first response scale* (Veenhoven, on at least chapter 8 on page 66 is entitled “Use of This Data-Set” implies that the authors *receiv[ed]* data. Also, on page 54, Veenhoven describes databanks and archives from which data are received. Finally, on page 63 Veenhoven refers to two disparate response scales: “life-satisfaction that is either scored on a 0-10 scale or on a 1-10 scale.”, hence *a first response scale*.);
- *receiving at least one second survey score based on a second response scale* (See the rejection analysis of the previous limitation which also corresponds to a *second response scale*);
- *creating a first converted score by converting each first survey score to a common response scale* (Page 61: “...to transform these to a common scale...”);

*and creating a second converted score by converting each second survey score to a common response scale.* (Veenhoven, on page 61 states: "Linear transformation is more appropriate where the difference is only in the length of graphic rating-scales." Here, *converting* equates to 'transformation'. On page 63, "...if the difference between response scales is only the length. For instance in the case of the same question on life satisfaction that is either scored on a 0-10 scale or on a 1-10 scale. In such cases simple linear transformation will do." (emphasis added) where there is indicated at least two different responses and therefore two converted scores that are transformed to a common scale.)

Veenhoven does not specifically disclose that the methods above are carried out on a computer. However, Veenhoven does disclose database capability. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to modify the techniques described in Veenhoven because employing such means would increase the efficiency of the surveying and analysis process of the claimed invention.

17. Claims 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Veenhoven as applied to claims 1 and 9 above, and further in view of Garson (*Sampling-1998*).

**Claim 2 and 10:**

Veenhoven describes and/or discloses the limitations in the rejection of claims 1 and 9. Although Veenhoven refers numerous times to "standardizing scores" (in at least page 51), Veenhoven does not explicitly refer to the method of

- *standardizing the first and second converted scores* in the manner described in Applicant's specification. Note however, that Garson does refer to this standardization process notwithstanding the fact that this method step is not claimed. For purposes of assisting the Applicant, Examiner directs the Applicant's attention to Garson, on page 8: "**Weighting for non-response.** [...] If in such situations one finds the observed distribution does not conform to the true population, one may wish to weight responses to adjust accordingly. For instance, if too few women are in the



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respondent pool, one might wish to weight their responses more than the male responses. For instance, if the true proportion by gender is 50-50, and if one got 40 females and 60 males, then one could weight each female response by 1.5. This, in effect, gives 60 females and 60 males.”

Applicant states that this standardization process pertains to *the number of responses* so as *[t]o mitigate* (see page 10, line 6) the influence or bias of different sizes of contributed scores. Applicant further states that the method *duplicate[es] each survey ... by the resulting quotient number of times*. This, in effect, assigns more weight to those survey scores that come from hotels with fewer responses and less weight to those survey scores from hotels with more responses. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to combine the teachings of Veenhoven with those of Garson to ‘standardize’ scores so as to “adjust an existing sample for known biases, and such correction is better than the alternative of no correction.” (Garson, page 7 at bottom).

18. Claims 3–6 and 11–14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Veenhoven as applied to claims 1 and 9 above.

**Claim 3 and 11:**

Veenhoven describes and/or discloses the limitations in the rejection of claims 1 and 9. Veenhoven does not explicitly disclose

- *calculating a first primary mean score based upon the first converted scores; and*
- *calculating a second primary mean score based upon the second converted scores,*

but see Veenhoven on page 51 which refers numerous times to “converting means scores” which, *ipso facto*, indicates a calculation of mean scores for the different data sets. Also, Veenhoven specifically refers to “data [that] are organized in comparable sets.” (Page 54 at bottom) Furthermore, Examiner takes **Official Notice** that it is old and well-known as well as commonplace in the survey sampling arts and statistical analysis arts to calculate mean values and related measures of central tendency. Therefore, it would have been obvious to

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one with ordinary skill in the art at the time of the invention to calculate mean values for a set of values and to utilize computer related means for doing so as the calculation of means provides a useful measure of central tendency that can be utilized in further statistical analysis to assess the relative scores among distinct clusters of scores (as in assessing the relative scores of distinct hotels).

**Claims 4 and 12:**

Veenhoven describes and/or discloses the limitations in the rejection of claims 1 and 9.

Veenhoven further teaches the following limitation as shown.

- *combining the first and second converted scores into one combined data set* (page 24, 2<sup>nd</sup> paragraph “...combining the responses in a sumscore.” (emphasis added) and on page 57: “More far-reaching is transforming all scores for all questions to one standard; i.e. to an imaginary 100 step happiness scale. That would of course create the greatest possible data-set.” (emphasis added) where the emphasized text indicates transformation of a number of different scores and then ‘creating’ a single (the) composite or combined data set.);

Veenhoven does not explicitly disclose *resampling each primary mean score to form a mean score distribution*.

- *resampling the combined data set to calculate a mean score distribution*.

However, Examiner takes **Official Notice** that it is old and well-known as well as commonplace in the survey sampling arts and statistical analysis arts to use the method of resampling to obtain a distribution of values which in this case are percentage score values associated with a particular entity, *i.e.*, the *primary* cluster. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to utilize resampling methodology because, as shown in Garson, page 12: “Resampling is an alternative inductive approach to significance testing, now becoming more popular in part because of the complexity and difficulty of applying traditional significance tests to complex samples.” and so that the resulting statistical data can be utilized in further statistical analysis to assess the

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relative scores among distinct clusters of scores (as in assessing the relative scores of distinct hotels).

**Claim 5 and 13:**

Veenhoven describes and/or discloses the limitations in the rejection of claims 4 and 11. Veenhoven does not explicitly disclose *providing statistical tests of differences between the first and second primary mean scores*. However, Examiner takes **Official Notice** that it is old and well-known as well as commonplace in the survey sampling arts and statistical analysis arts to provide statistical tests to determine whether there are any statistically significant differences between and among distinct sets of values. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to employ methods for providing statistical test to sets of values with the methods of Veenhoven as shown, as the calculation of test statistics can be utilized to assess the distribution of scores among distinct clusters of scores (as in assessing the distribution of scores of distinct hotels).

**Claims 6 and 14:**

Veenhoven describes and/or discloses the limitations in the rejection of claims 4 and 12. Veenhoven does not explicitly disclose *mapping individual scores from the mean score distribution*. However, Examiner takes **Official Notice** that it is old and well-known as well as commonplace in the survey sampling arts and statistical analysis arts to rank a value associated with a particular entity in terms of an overall distribution. A common and well-known method is a percentile ranking which maps particular scores with respect to an overall distribution of scores. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to utilize a percentile mapping methodology so that the resulting percentile scores can be utilized to assess the relationships among distinct clusters of scores (as in assessing the relationships of distinct hotels) and increase the efficiency of the surveying and analysis process of the claimed invention.

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19. Claims 7, 8, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Veenhoven as applied to claims 6 and 14 above, and further in view of Ross (Air University Sampling and Surveying Handbook-1996).

**Claims 7 and 15:**

Veenhoven describes and/or discloses the limitations in the rejection of claims 6 and 14.

Veenhoven does not specifically disclose the limitations below, but Ross, as shown, does:

- *the mapped scores are transmitted to at least one service provider* (Ross, on at least page 49 states: "Prepare report for customer(s).").

Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to combine the methods of Veenhoven with those of Ross so that the results of the statistical methods described in Veenhoven (and also Ross) can be communicated to those entities that request such information and thereby provide a valuable and economically worthwhile service to such service providers.

**Claim 8 and 16:**

Veenhoven describes and/or discloses the limitations in the rejection of claims 6 and 14.

Veenhoven does not specifically disclose the limitations below, but Ross, as shown, does:

- *the mapped scores are utilized [instructions] for assessing at least one service or product provider's performance* (Ross, on at least page 1 states: "A survey, then, is much more than the mere compiling of data. The data must be analyzed, interpreted, and evaluated." (emphasis added) where "interpreted" and "evaluated" correspond to *assessing*. Ross further states that this is for "customers" (see the rejection of claim 7) which corresponds to *service or product provider's performance*.)

Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to combine the methods of Veenhoven with those of Ross so that the results of the statistical methods described in Veenhoven (and also Ross) can be communicated to those

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entities that request such information, utilized to assess their performance and thereby provide a valuable and economically worthwhile service to such service providers.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry of a general nature or relating to the status of this application or concerning this communication or earlier communications from the Examiner should be directed to **Dr. Mark A. Fleischer** whose telephone number is **571.270.3925**. The Examiner can normally be reached on Monday-Friday, 9:30am-5:00pm. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, **Beth Van Doren** whose telephone number is **571.272.6737** may be contacted.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://portal.uspto.gov/external/portal/pair> <<http://pair-direct.uspto.gov>>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866.217.9197** (toll-free).

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Mark A. Fleischer, Ph.D.

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Examiner, Art Unit 3623

2 July 2008

/Beth Van Doren/

Supervisory Patent Examiner, Art Unit 3623